DOCUMENT RESUME

ED 315 142 PS 018 133

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TITLE The Role of Adults in Infant-Peer Interactions.
PUB DATE Apr 89
NOTE 10p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Kansas City, MO, April 27-30, 1989).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Infant Behavior; *Interpersonal Relationship; *Mothers; *Parent Influence; *Peer Relationship
IDENTIFIERS *Encouragement

ABSTRACT

Adult influences on infant peer interaction were examined to determine whether infants would be more likely to sustain interaction with one another when their mothers were encouraging them to do so than they would when their mothers were busy with something else. A total of 36 infants, 14 months of age, were videotaped during 30-minute play sessions consisting of two previously unacquainted infants and their mothers. Observations were made under two conditions: when the mother was encouraging infant interaction and when she was busy filling out a questionnaire. Infants remained in proximity to their peer partners, interacted more frequently, spent more time interacting, and had longer interactions with one another when the adults were busy, than was the case in the condition of encouragement. Thus, on the whole, infants were better able to sustain interactions when adults ignored them than when they attempted to assist them. Most adult attempts to elicit peer interaction failed. Infants may be more "expert" than adults in interacting with other individuals who do not yet use language or other culturally appropriate means of interacting. Adults, however, may facilitate or inhibit infant peer interaction, depending on the strategy they use. It is concluded that assisting in toy placement and manipulation may be more helpful than giving advice or verbal instruction. (Author/RH)

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The Role of Adults in Infant-Peer Interactions

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ABSTRACT

The role that adults play in facilitating infants' cognitive and social development is widely recognized. Recent studies have shown that parents may guide infants' initial encounters with unfamiliar adults. In this study we examined adult influences on infant-peer interaction. We wished to see whether infants would sustain interaction with one another more when their mothers were encouraging them to do so than when they were busy with something else.

Thirty-six 14-month-old infants were observed in pairs under each of two conditions: when their mothers were encouraging them to interact with one another, and when their mothers were occupied by filling out questionnaires. Infants remained in proximity to their peer partners, interacted more frequently, spent more time interacting, and had longer interactions with one another when the adults were busy with something else than when they encouraged the infants. Thus on the whole infants were better able to sustain interactions when adults ignored them than when they attempted to assist them. Most adult attempts to elicit peer interaction failed. Infants may be more "expert" than adults in interacting with other individuals who do not yet use language or other culturally appropriate means of interacting. Adults, however, may facilitate or inhibit infant peer interaction depending on the strategy they use. Assisting in toy placement and manipulation may be more helpful than giving advice or verbal instruction.

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Presented at the biennial meeting of the Society for Research in Child Development, Kansas City, Missouri, April 1989.

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Introduction

The influence of maternal scaffolding on infants' language and cognitive development has been widely recognized. Recent studies have shown that maternal guidance may facilitate infants' social development as well. In particular, maternal assistance has been shown to enhance infants' interactions with unfamiliar adults (see Hill & Valsiner, 1988). As with language and cognitive skills, adults clearly have more expertise than infants - an adult knows more than an infant about how to communicate with another adult. But what about interaction with other infants? Who is the expert? Many studies have shown that when given the opportunity to interact with adults and peers, infants overwhelmingly prefer peers. Do agemates know better than adults how to interact with infants? Who is the expert in getting to know another person who does not talk, who in fact does not yet use culturally appropriate forms of communication, an adult or another infant?

We attempted to answer these questions by manipulating adult assistance in the interaction of infant peers. We wished to see if infants could sustain interaction better with or without adult encouragement.

Method

Procedure

We videotaped thirty-six 15-month-old infants and their mothers during 30-minute play sessions consisting of two previously unacquainted infants and their mothers. The adults' participation in the interactions between the infants was manipulated by asking mothers to encourage peer play for part of the session, and to refrain from doing so by filling out a very detailed background questionnaire for part of the session. We did not want to have mothers busy when the session first began, as other studies have shown the importance of mothers' "emotional availability" when infants are first exploring a new situation. Therefore, rather than counterbalance the "encouraging" versus "busy" conditions, we divided the session into three 10-minute trials, the first (Trial 1) and last (Trial 3) in which the adults encouraged peer play, and the middle trial (Trial 2) in which the mothers were filling out the questionnaire. Order effects could then be eliminated by comparing, for each measure, the average of the two "encouraging" trials with the "busy" trial. We compared several aspects of peer interaction: the amount of time the infants spent interacting with one another, the frequency of interactions, the amount of time the infants spent in proximity to one another, and the time spent in different types of interactions (proximal and distal).

In addition to examining the infants' behavior, we examined the adults' behavior by focusing on the strategies they used to encourage peer interaction, and the success or failure of these various kinds of interventions.

Measures

Peer Interaction

In order to compare the frequency and duration of peer interaction in the "encouraging" and "busy" conditions, "interaction" was defined as a state in which the two infants were connected to one another in at least one of three ways: physically (in physical contact with one another), through an object (by contacting the same object), or visually (mutual visual regard). The amount of time spent in the interactive state (duration of interaction), and the frequency of attempts to engage a partner in the interactive state (social initiations) could then be obtained.

In order to compare how near to one another the two infants remained in the two conditions, "proximity" was said to occur when the two infants were within touching distance of one another, and remained so for at least 10 seconds. The duration of time infants spend in proximity to one another in each condition could thus be compared.

Interactions were classified into two categories, "proximal" interactions, which occurred when the two infants were in proximity to one another, and "distal" interactions, which occurred when they were not in proximity. "Proximal" interaction involved such behaviors as touching the same toy, or touching one another. "Distal" interaction involved such behaviors as pointing to the same object or picture, gesturing to one another, and vocalizing or verbalizing to one another.

The median percentage of agreement between independent observers was at least 85% for each measure. All comparisons between the "encouraging" and "busy" conditions were analyzed with either correlated t-tests or repeated measures analyses of variance.

Adult Interventions

A list of the means by which the adults "encouraged" peer interaction was obtained by first transcribing adult behaviors which occurred when 1) the infants were not interacting, and an adult directed one infant's attention to the other, or both infants' attention to the same object, or 2) the two infants were already interacting and an adult interacted with one or both infants. The adult interventions thus obtained are listed in Table 1. The effectiveness of the adult interventions was assessed by examining whether or not they were successful, i.e., led to peer interaction or to the continuation of interaction.

Results

Adult strategies to encourage peer interaction could be classified into three major categories: verbal interventions, object interventions, and interventions involving physical contact. Table 1 presents a complete catalogue of these strategies.

Peer Interaction

On the whole, these adult strategies did not increase peer interaction. Infants remained in proximity to one another reliably more when their mothers were busy (M=259.7 seconds) than when mothers were encouraging (M=135.0 seconds; t=3.2, p=.007), interacted reliably more frequently with one another when their mothers were busy (M=4.7) than when mothers were encouraging (M=3.2; t=3.1, p=.007), and spent more time interacting with one another when mothers were busy (M=161 seconds) than when they were encouraging (M=75.6 seconds; t=3.5, p=.004; Fig. 1). It should be noted that proximity and interaction were not the same; infants playing side by side with separate toys were considered to be in proximity to one another, but not engaged in interaction with one another. Finally, interactions were reliably longer during the trial in which mothers were busy than in the trials in which they were encouraging (mean length of the longest interaction in Trial 1 = 36.4 seconds, in Trial 2 = 87.8 seconds, and in Trial 3 = 44.1 seconds; F=8.1, p=.002; Fig. 2). That this increased sociability with peers occurred when mothers were not immediately available, a situation thought to decrease exploration of the physical and social environment, may indicate how interested infant peers are in one another.

Infants seemed better able to sustain interaction when not distracted by adults' suggestions or interventions. However, it appears that although some adult interventions disrupted ongoing interactions, other kinds helped sustain them. For example, peers engaged more in distal interaction when mothers were encouraging (M=9.5 seconds) than when they were busy (M=0.9 seconds; t=3.4, p=.005; Fig. 1).

Adult Interventions

We next looked more closely at the adult interventions themselves to attempt to gain further understanding of their effectiveness (or ineffectiveness). Adults intervened an average of 10.9 times during each session. Of the total interventions, 66% were verbal, 29% were object-related, and 5% involved physical contact. Most attempts to encourage interaction occurred when the infants were not interacting with one another (77%), although some occurred in an effort to sustain ongoing interaction (22%). Attempts to elicit peer interaction when infants were not interacting with one another failed more than they succeeded; 67% failed whereas 33% succeeded. Furthermore, when infants were already interacting with one another, adult intervention was as likely to stop an ongoing interaction as to keep it going (56% ended ongoing interaction versus 44% led to its continuation). Adult intervention in an ongoing peer interaction appeared to distract the infants from one another.

Although the adults most often used verbal means to encourage peer interaction, this mode of encouragement was not as effective as interventions involving objects. When infants were not interacting with one another, 79% of verbal acts of encouragement failed to elicit interaction, whereas 21% succeeded. When infants were interacting, 70% of verbal interventions stopped the ongoing interaction. Object interventions appeared to be more effective; when

infants were not interacting, 59% of object-related encouragements succeeded in eliciting interaction, and 41% failed. When infants were already interacting, 80% of object-related interventions led to continued interaction, whereas 20% stopped the ongoing interaction.

Discussion

The findings indicate that adult assistance does not seem to facilitate peer interaction. In fact, on the whole, adult intervention appeared to distract the infants from one another. The infants were better able to sustain interaction when the adults ignored them than when the adults assisted them. Studies of slightly older children have found that adult assistance does in fact facilitate peer interaction (see Parke & Bhavnagri, 1988). We must then ask, why is adult assistance not effective in facilitating infant peer interaction? A closer look at the types of assistance adults offer helps resolve this apparent dilemma.

We found that the adults were most likely to verbally encourage the infants to interact. As we know from other studies, fourteen-month-old infants are quite interested in language, and often engage in interactive routines with adults that involve language. But most 14-month-olds are not speaking yet themselves. They therefore use other means to interact with one another. Their interest in one another, and ability to socially interact, are highlighted by the fact that they are able to do without a common language. As adults, we have difficultly interacting without one, and therefore may not give the best advice about how to do so. Fortunately, infants appear do to quite well with this without our help.

Although infants seemed to sustain interaction better when the adults were not attending to them, some kinds of adult support was found to be helpful. As fourteen-month-old infants may have some difficulty in coordinating toy play with peers, adult help in positioning toys so that both infants have easy access may be helpful in facilitating peer interaction.

Adult intervention involving language may become helpful to these infants in just a few months, when they are no longer infants and begin using language to communicate with one another. In the present study, the infants rarely used words or symbolic gestures during the entire session, and only very infrequently did a pair of infants use them with each other. When they did, adult assistance may have helped sustain such interaction; distal interaction between the infants (interaction involving words and/or conventional gestures) did improve with adult guidance.

Infants may be more "expert" than adults at some forms of peer interaction, whereas adults may provide a scaffold to support other forms of communication between very young peers.

References

Hill, P.E., & Valsiner, J. (1988). Getting to know strangers: Toddlers' construction of relationships. In J. Valsiner (Ed.), Child development within culturally structured environments. Vol 1. Parental cognition and adult-child interaction. New Jersey:Ablex.

Parke, R.D. & Bhavnagri, N.P. (1988). Parents as managers of children's peer relationships. In D. Belle (Ed.), Children's social networks and social supports. New York: Wiley.

TABLE 1. ADULT INTERVENTIONS IN INFANT-PEER INTERACTIONS

Verbal Interventions

1. An adult offers a suggestion or command
   e.g. "Throw the ball to Sarah."
   "Say hi to Adam."
   "Give the baby a hug."

2. An adult comments on one or both infants' activities while they are playing with each other.
   e.g. "Wow", that's fun!"
   "Are you playing ball with Max?"
   "Is that a daddy?" (when child points to a picture on the wall)

3. An adult reprimands a child
   e.g. "Stop that."
   "Give the ball back to Alex."
   "He had it first."

4. An adult attempts to direct an ongoing interaction
   e.g. "Now it's Nicky's turn."

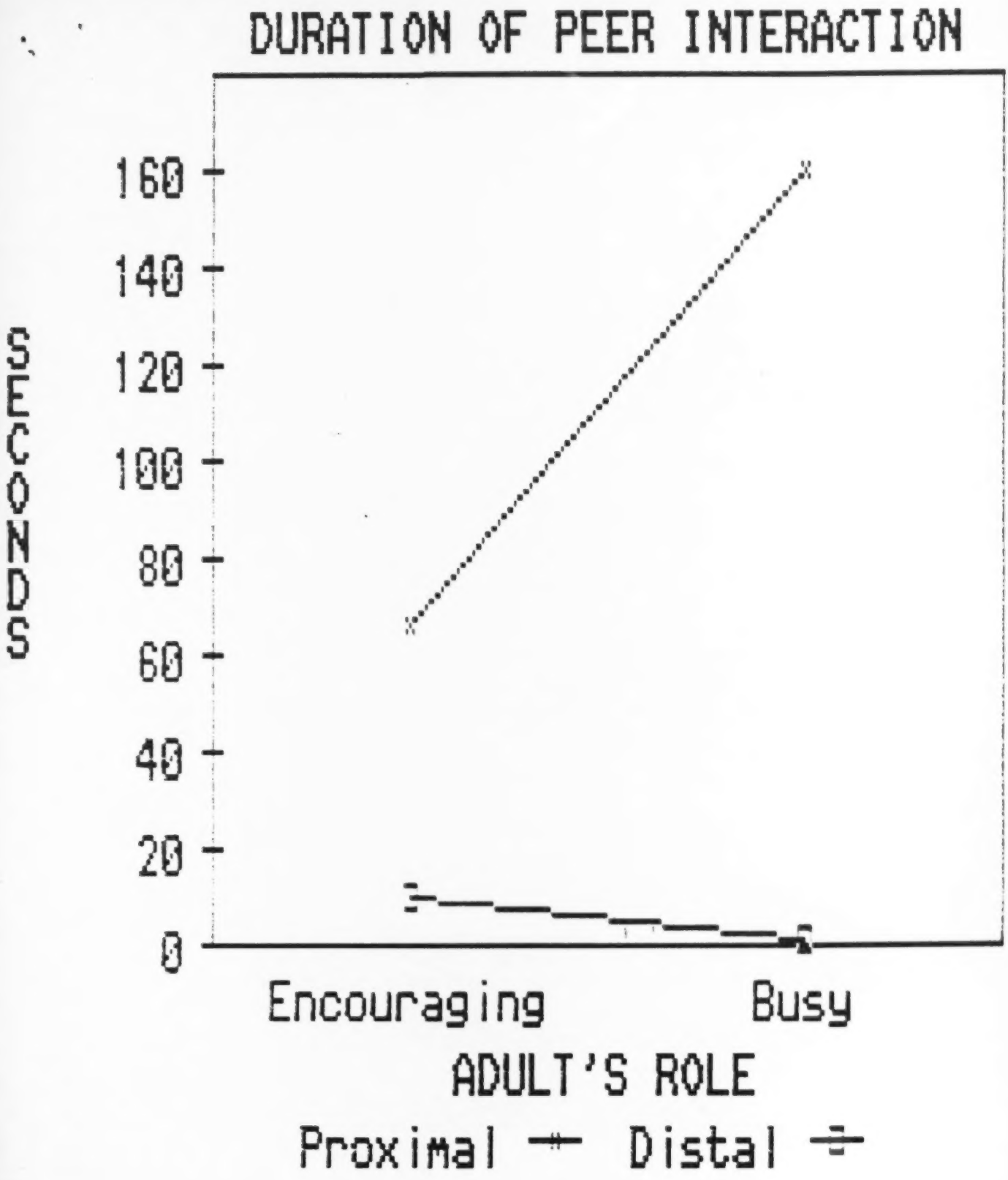
5. An adult attempts to direct one or both infants' attention to something
   e.g. "Look at the (picture of a) doggie."

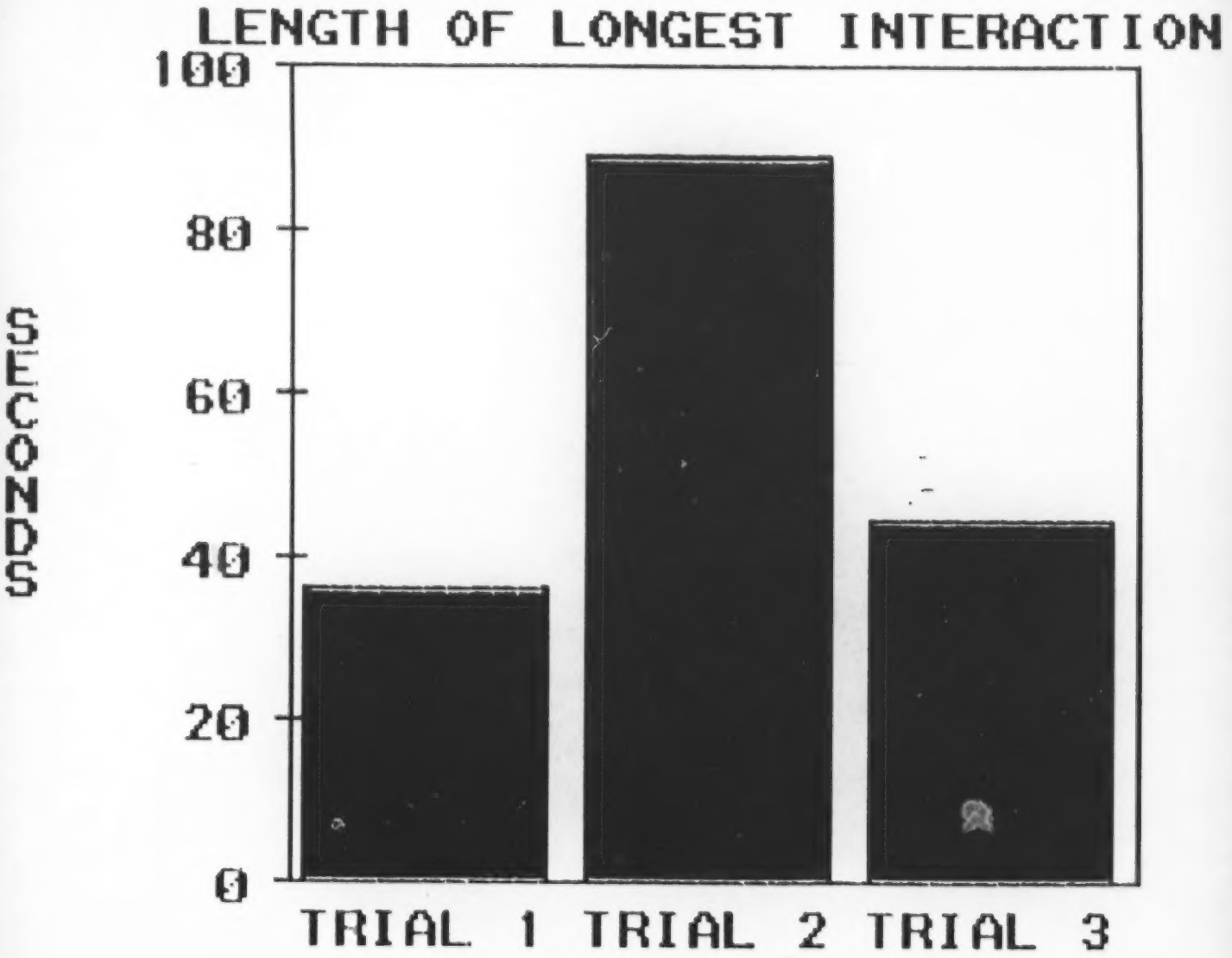
Interventions Involving Objects

1. An adult positions an object so that both infants can play.
2. An adult holds an object and both children play with it.
3. Adult joins in the peer play by manipulating a toy.
4. An adult gives an object to one child and the other joins in.
5. An adult accepts an object offered by one child and the other joins in.
6. An adult accepts an object offered by one child and gives is to the other.
7. An adult (forcefully) takes an object from one child and gives it to the other.

Interactions Involving Physical Contact

1. An adult holds a child in her lap when the child interacts with the peer.
2. An adult touches a child while the child interacts with the peer.
3. An adult grooms a child who is playing with the peer (e.g. adjusts the child's clothes, fixes his or her hair, etc.).
4. An adult shifts the position of a child so the two are better able to play together.
5. An adult moves one child away from the other.


DURATION OF PEER INTERACTION
SECONDS
160
140
120
100
80
60
40
20
0
Encouraging
Busy
ADULT'S ROLE
Proximal
Distal


LENGTH OF LONGEST INTERACTION
SECONDS
100
80
60
40
20
0
TRIAL 1
TRIAL 2
TRIAL 3